

## **P 04: Comparison of Birth Weight and Umbilical Cord Diameter of Male and Female Newborns**

*Romini Niranjan<sup>1</sup>, Coonghe PAD<sup>2</sup>, Muhunthan K<sup>3</sup>, Sivananthini Uthayakumar<sup>1</sup>*

*1. Department of Anatomy, Faculty of Medicine, University of Jaffna, Sri Lanka; 2. Department of Community Medicine, Faculty of Medicine, University of Jaffna, Sri Lanka; 3. Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Jaffna, Sri Lanka*

**Introduction:** Healthy uteroplacental circulation is an important factor in producing a healthy fetus. Placenta developed from both maternal and fetal components. After about the four weeks of gestation the only link of fetus to placenta is the umbilical cord. It is a cylindrical structure with two arteries and one vein embedded in a gelatinous Wharton's jelly.

**Objectives:** To compare the relationship between umbilical cord diameter with the sex and weight of the fetus

**Methods:** A consecutive series 52 fresh umbilical cords of 27 male and 25 female fetuses of pregnant mothers were obtained. Size of 5 cm of cord was dissected in the mid portion of the umbilical cord after the delivery of placenta at Teaching Hospital, Jaffna. Immediately both horizontal and vertical diameters of the umbilical cord were measured by using the Vernier caliper. Average diameter of the umbilical cord was noted. Fetal weight was measured in grams.

**Results and discussion:** In the total of 52 umbilical cords studied the diameter of the cord was in a range of 7.25 mm -14.75 mm. The mean diameter of the umbilical cord of the male fetus was 10.898mm (SD 1.92) and for female fetus was 9.44mm (SD 1.412). This difference was statistically significant. ( $t=3.094$  and  $p=0.003$ ). It is also observed the positive correlation between the birth weight and diameter of the umbilical cord of male and female fetuses. It was statistically significant. ( $r = 0.446$  and  $p=0.001$ ).

**Conclusion:** The diameter of umbilical cord in male fetuses is statistically larger compared to female fetuses. Also statistically significant correlation was found between the cord diameter and weight of the fetus. Large scale studies needed to revalidate our findings.